ITEEA Engineering by Design: Technology Education Courses

To enhance student's ability to exist and function in a technological world, the technology department offers the following course to encourage learning and knowledge of diverse technological elements, and to promote career and readiness skills in an ever-developing world.

Foundations of Technology (9/10)

Students will develop an understanding of the influence of technology on history by exploring how people of all times and places have increased their capability by using their unique skills to innovate, improvise, and invent. They gain an understanding of technology innovation and the fact that it often results when ideas, knowledge, or skills are shared within a technology, among technologies, or across other fields of study. Students develop an understanding of engineering design, the formal process that transforms ideas into products or systems of the designed world. They select and use manufacturing technologies and understand that modern manufacturing technologies produce quality goods at low prices, enhancing the quality of life for many people. Students select and use construction technologies and recognize that cultural norms, environmental conditions, and the requirements of enterprises and institutions impact the design of structures. Opportunities are provided that enable students to select and use energy and power technologies and to explore the processing and controlling of the energy resources that have been important in the development of contemporary technology. They become familiar with information and communication technologies and their role in maintaining competitive economic growth. The course concludes with the synthesizing of major ideas through an understanding of the core concepts of technology, with an emphasis on "systems thinking" and related principles.